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SERVICE

NEWS

ISSUED FOR THE STAFF OF THE SOIL CONSERVATION
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December 12, 1940



REGIONAL NURSERY CHIEFS
HOLD CONFERENCE MEETINGS
IN WASHINGTON, DEC. 2 - 7

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Much has been written and spoken in recent months about the need for a high degree of hemispheric solidarity. A great deal has been accomplished in the fields of economic, social, cultural and military coordination between our country and South American republics. These efforts are important -- of extreme importance -- as one of the larger phases of the total defense program of the United States.

We of the Soil Conservation Service have been alert to learn just what we can do, as individuals and as a group, to help in this program.

Unquestionably all efforts toward hemispheric solidarity must be based squarely upon hemispheric understanding. Employees of the SCS are in position to make a large contribution toward bringing about a more complete understanding of hemispheric problems and aims among the people of the United States. And the starting point in accomplishing this goal is with ourselves.

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The chiefs of the Regional Nursery Divisions in conference with the Washington office concluded a busy week of meetings with a trip to the Beltsville Research Center on Saturday, December 7. After a general inspection of the Center the work now being conducted on the Soil Conservation tract by the Nursery Division was explained by Harry A. Gunning and Franklin J. Crider.

The Nurserymen's meetings got under way on December 2 and the discussions were opened by J. S. Barnes who outlined the Secretary's recent instructions on the purchase of nursery stock. The Department's seed policy was explained by Mr. Gunning, and the SCS plant materials policy was discussed by M. H. Cohee and J. F. Preston. Perhaps the highlight of the meetings was the Tuesday program at which the regional nurserymen reported on the contributions of the Nursery Division to the Service program. Dr. Bennett and a number of the Washington division chiefs attended this session.

A. L. Hafenrichter's description of the job of the regional nurseryman as being that of supplying the best plants for erosion control, properly managed and

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First, we must thoroughly acquaint ourselves with the lines of approach that are being used by our government to create a closer understanding of the problems and objectives which North American, Central American, and South American countries share. But that is not enough. We must learn, likewise, something of the historical background, social, economic, and agricultural problems, and desires of the people who are our neighbors in this hemisphere.

Fortified with such knowledge, we will be better able to help farmers, through normal day-to-day contacts, to come to understand the full significance and the "why" of present efforts toward hemispheric solidarity.

In these times each of us must expand our knowledge and our efforts beyond the requirements of our SCS duties. We must be so informed on matters of national defense and hemispheric solidarity that we can answer the questions that are sure to be asked of us as representatives of the government.

The farmers with whom we work are more than farmers. They are also very important citizens of this democratic nation. By keeping ourselves thoroughly informed and up-to-date on hemispheric events as they happen we can help farmers understand the reasons for any actions that may be necessary -- actions that conceivably might affect their day-to-day lives. By so doing we will have made a definite contribution to hemispheric solidarity.

Summing up, then, here is at least a good part of the answer to the question, "What can I do to help along the program for hemispheric solidarity?"

1. Keep yourself informed on the direction of current activities of the United States, in furtherance of hemispheric

solidarity.

2. Learn something of the historical background, problems, and desires of South American countries.

3. Correlate this information in your own mind and pass it on to the farmers with whom you work.

If you have any questions or if you desire any source material on agricultural cooperation with the other American republics, SERVICE NEWS or the regional information officer will be glad to furnish available information upon request.

7 MORE STATES CONSIDER DISTRICT LAW ENACTMENT

The enactment of a soil conservation district law is being considered in at least seven States, in addition to the 38 States which now have such laws, according to information which has been received in Washington. We have been informed also that the soil conservation districts laws in at least three States may be amended to extend the authority of districts in order to carry out a more complete erosion control program or to make their administration more efficient.

GREAT OAKS FROM ACORNS

Fifteen million oak tree seedlings for erosion control and wildlife conservation have been planted by the Soil Conservation Service from 1935 to 1939 inclusive. In addition, the CCC has made direct seedings of 15,000,000 oak acorns.

The CCC camp at Americus, Ga., has won the safety award for the State of Georgia. Complete cooperation by officers, technical service and enrollees during the past six months has resulted in a total of 15,900 man days without a single lost time accident.

AGRONOMISTS AND SOIL SCIENTISTS HOLD JOINT MEETING IN CHICAGO

The American Society of Agronomy and the Soil Science Society of America held their joint meeting in Chicago from December 4 to 6, at which time nine members of SCS presented papers of interest at the various section meetings.

SCS members who appeared on the program and the subjects of their papers are: T. C. Peele, "Influence of Microbial Activity upon Aggregation and Erodibility of Lateritic Soils"; F. L. Duley, "Cultural Methods and Equipment for Utilizing Crop Residues for Soil and Moisture Conservation"; G. M. Browning, "The Relation of Type and Amount of Pasture Vegetation to the Dispersion Ratio"; George R. Free, "Interrelationship of Infiltration, Air Movement and Pore Sizes for Porous Media such as Sand and Soil"; E. A. Norton, "Trends in the Utilization of Field Surveys"; R. E. Uhland, "Field Method for Evaluating Effects of Physical Factors and Farm Management Practices on Soil Erosion and Crop Yields"; F. R. Dreibelbis and F. A. Post, "Studies on Soil Moisture Relationships at the North Appalachian Experimental Watershed"; Ford M. Milam and G. M. Browning, "The Lateral Movement of Water in Relation to Pasture Contour Furrows."

Dr. H. E. Middleton was chairman of Section Six, which dealt with Soil Technology, of the Soil Science Society. Other members of SCS who attended the Chicago meeting were C. R. Enlow, A. T. Semple, Harry H. Gardner, Alvin W. Goke, Grover F. Brown, and A. M. O'Neal.

Henry Loewen, CCC enrollee at Maple Lake, Minn., has been awarded the coveted silver star for driving 10,000 miles without an accident.

MANIFOLD WRITES ABOUT CENTRAL AMERICAN TOUR FOR RUBBER SURVEY

C. B. Manifold, Assistant Chief, Technical Operations, who is a member of a party now touring Central America to study the possibilities of rubber production in the Western Hemisphere, has written to C. R. Enlow from Guatemala City.

Mr. Manifold reports interestingly concerning the countries of Guatemala and El Salvador, which the party has surveyed to date. "There is a world of opportunity down here for soil conservation and the people are interested in it," says Mr. Manifold, "but the problem is to translate action units into an organized national program."

While in Guatemala the party visited the National Fair, where the key of all exhibitions was the agricultural exhibit. The agronomy posters of SCS Information Division had been translated into Spanish and were being distributed. The country is picturesque, says Mr. Manifold, and is very rich agriculturally, even if it is pretty much perpendicular.

El Salvador is a small country of only about 13,000 square miles -- "just a nice sized soil conservation district," but it is most densely populated and one of the hardest working countries. It is handicapped in its agricultural production by an annual six months' drouth.

W. E. Stokes of the Florida Experiment Station writes in the November Issue of the Southern Seedsman concerning Alyce clover, the legume that is being brought to the attention of farmers of the southeast by the Florida Station. Mr. Stokes says that the clover holds sufficient promise to warrant at least trial plantings in every section of the country.

NURSERYMEN CONFER HERE
(Continued from page 1)

cheaply produced, with the observational phase of the nursery work serving as the spearhead for the practical application of new plants to the new job of soil conservation, seemed to sound the keynote of the conference.

Further discussion developed the fact that an important part of the work of the Nursery Division is the testing of plant materials for use in the soil conservation program. It was brought out that many of the grasses, legumes, trees, shrubs, and browse plants have been domesticated from the native prairies and timber lands of the United States, and that to the many native plants brought into practical use for the first time have been added other species introduced from foreign countries. After the merits of these plants have been established, they are distributed for use on the farm lands throughout the United States. As a result of this work, better plants and better plant management methods are at hand as well as a better knowledge of production practices that make these plant materials available at less cost.

Other agencies of the Department and State experiment stations are cooperating in the plant observational work of the nurseries, particularly phases dealing with plant breeding, plant disease control, and the development of plants for such uses as hay, pasture, green manure, cover crops, wildlife food and shelter, fence posts, and fuel, combined with erosion control and soil conservation.

At the Wednesday meeting Henry Hopp of the Hillculture Division gave an interesting talk on the progress that has been made in the selection of strains of black locust, the most used woody species in the Service. M. M. Hoover reported on the cooperative uniform tests of improved strains of grasses as proposed by the

MAINE NEWS RELEASE
FEATURES CHIEF'S STORY

The College of Agriculture, University of Maine, has issued a news release for Maine papers in which is included a condensation of Dr. Bennett's article that appeared in the November issue of SOIL CONSERVATION. The news release features the comparison which the Chief made between the soils of Aroostook County, Maine, in 1908 and 1940.

Two Philadelphia musicians have copyrighted a song about "Honey of Honey Hollow." Their inspiration was a recent story and picture layout appearing in the Philadelphia Inquirer concerning soil conservation work in the Honey Hollow Creek watershed of Bucks County, Pa.

Division of Forage Crops and Diseases of the Bureau of Plant Industry.

On Thursday morning, discussion centered around the supplemental or field testing phases of the nursery observational work, with particular reference to the application of the "Clements Experimental Grid" to this type of work. A. E. Brandt participated helpfully in this discussion. In the afternoon, the matter of developing a more simplified system of recording the cost of nursery operations was taken up. Following this, Mr. Gunning outlined the reorientation of division responsibilities resulting from changes in the Service program.

The nurserymen devoted Friday to committee meetings and consultations with the Washington staff. The regional representatives who attended this conference were R.B. Thornton, Region 1; L.B. Scott, Region 2; A.E. Miller, Region 3; C.B. Webster, Region 4; A.D. Slavin, Region 5; B.F. Kiltz, Region 6; A.D. Stoesz, Region 7; C.G. Marshall, Region 8; A.L. Hafenrichter, Region 9; and Fred W. Herbert, Region 10.

DR. T. S. BUIE DISCUSSES THE PROPER USE OF TIME

Pointing out that efficient use of each employee's time has become an essential factor in meeting the demands now being made upon the Service, Dr. T. S. Buie, Regional Conservator for Region 2, compares the Service personnel today to a company of soldiers deployed in battle formation.

"In the old project days we were like a company in close-order drill on the parade ground with each man flanked by others upon whom he might rely for guidance," Dr. Buie commented. "There was opportunity to help the backward, and if one man failed to utilize his time efficiently it was not so obvious.

"But today, in cooperation with soil conservation districts, we are deployed in open battle formation, with each man on his own and with no one by his side to give directions or guidance as heretofore. If one man falters through inefficiency or through failure properly to utilize his time, his portion of the line fails to advance with that on each side and all eyes are focused upon him."

Some of the things that will help an employee to make more efficient use of his time were listed by Dr. Buie as:

Being on the job ready for work on time, and giving immediate attention to the job in hand.

Planning one's field work so that if one farmer is not available as expected, there will be other jobs in the immediate vicinity which can be undertaken without loss of time or travel.

Careful planning of itineraries so that several persons may make a trip together, instead of separately, and thoughtful planning of work so that all pertinent matters may be handled in one visit instead of repeating the trip the next

REGION PLANS EDUCATION TOUR TO WEST VIRGINIA

Region 1 is planning an educational tour and training program in West Virginia, to emphasize the group action approach to farm planning. The regional division chiefs of agronomy, engineering, and training plan to visit a large number of the work units in West Virginia and meet with the area and work unit technicians at central locations.

The meetings will be devoted to discussions of methods which may be employed in conducting group training meetings for farmers so that soil conservation practices may be effectively used. Land use capability material will be used in the discussions to illustrate the classes of land and the most effective uses of land in the different classes.

Logan S. Carter, Head of the Soil Management Section of the Agronomy Division, will represent Washington on the tour. The regional representatives will be Grover F. Brown, Chief of Agronomy Division; Clare A. Frye, Chief of Engineering Division; and Allen McClellan, Head of Training Section.

The *Progressive Farmer* has accepted an article written by Charles G. Webb, for tentative publication in the February issue. Mr. Webb writes concerning some of the moral and spiritual values which derive from soil-saving farming. As a basis for his statements, he cites economic studies made at the Duck Creek Demonstration Project near Lindale, Smith County, Texas.

day or the next week.

Careful analysis of each job, both in the field and in the office, so that unnecessary duplication of records or reports will be avoided.

S. C. S. -- S. C. S. -- S. C. S.

Just as the ocean liners in distress have their code signal S.O.S., so California farms suffering from erosion have their distress signal, "S.C.S." -- meaning Save California Soil. One of the first instances of conserving soil by means of radio waves occurred recently when Station W60ML at Pescadero, California, called Station W6SVH at Watsonville, California, and allowed farmer Alec Moore of Pescadero to confer with SCS technicians at Watsonville regarding his erosion problems. After describing his problems to SCS technicians, via radio, he was advised regarding several erosion-resistant forage grasses, including both Harding and Italian Rye grass and also Kikuyu grass. Mr. Moore was also surprised and delighted to learn that nursery stock, and particularly black locust, can now be purchased locally from the California State Nursery. SCS technicians at Watsonville expect to follow up this case to study the degree of application of the advice.

REGIONAL BULLETIN IS POPULAR

A recent Farmers' Bulletin entitled "Soil Defense in the Pacific Southwest," has been commended by the University of California and the Extension Service personnel. Director Crocheron of the Extension Service expressed a desire that copies be widely distributed in the State. Professor Walter Weir of the College of Agriculture requested that he be supplied with 2,000 copies.

John P. Evans, recently Chief of the Regional Personnel Management Division in Region 1, has resigned to take the position of Chief of Personnel Division in Washington of the Rural Electrification Administration. J. Blair Muffley is now Acting Chief of the Personnel Management Division at Upper Darby.

PATENTS TO SCS EMPLOYEES

Walter U. Garstka, SCS Soil Technologist, East Lansing, Mich., and Robert C. Burt, Forest Service, were granted Patent No. 2,218,500 for their invention entitled "Float Switches." The inventors requested that the patent be dedicated to the free use of the people of the United States, which permits its use and manufacture without the payment of royalties to the inventors. Complete details of the Float Switch may be obtained by communicating with Mr. Garstka, care of the Michigan Agricultural and Mechanical College, East Lansing, Mich.

Lloyd O. White, Junior Foreman of Laborers, Cortez, Colorado, has been granted Patent No. 2,219,160 for his invention entitled "Combined Bulldozer and Ripper." The device may be constructed with little expense and can be attached to bulldozer blades already on the market. The Government has obtained a shop-right interest in the invention which permits its manufacture and use by or for the Federal Government without royalty payments. Mr. White has retained the commercial privileges. Complete details concerning the invention can be obtained by communicating with Mr. White through James Syme, Chief, Regional Service Operations Division, Albuquerque, N. Mex.

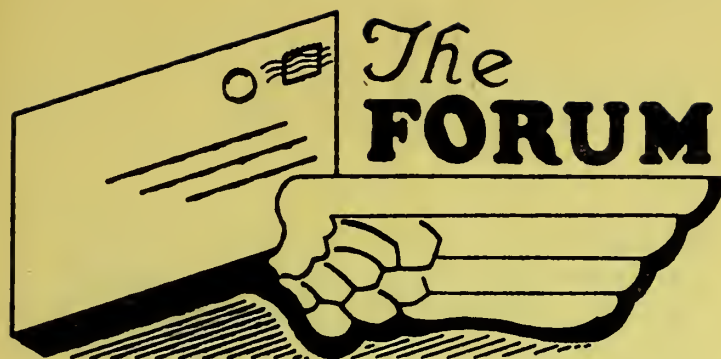
PERSONNEL TRANSFERS

Henry A. Homan, Engineering Draftsman, from Lincoln, Nebraska, to Caliente, Nevada.

Elmer Hambrick, Photographer, from Washington, D. C., to Upper Darby, Pa.

David K. Crook, Cartographic Engineer, from Upper Darby, Pa., to Washington, D. C.

Thornton G. Taylor, Forester, from Albuquerque, N. Mex., to Washington, D. C.



EDITOR, SERVICE NEWS: Since others in the Service are interested in the problem of "stubble mulch", I am asking that the letter which I have written to Regional Conservator Harry E. Reddick be published in SERVICE NEWS.

H.H. Bennett

"Replying to your letter of November 22, asking for a definition of stubble-mulch, let me see what I can do

"'Stubble mulch' is a technical term employed in the science and practice of soil and water conservation to define that process of protecting cultivated or bare land in such a way as to conserve soil and soil moisture through the use of a complete or partial surface covering composed of some form of crop stubble or residue. The mulching material may consist of (1) that portion of the stubble of a preceding crop, as wheat straw or corn stalks, left standing on the ground, or partially incorporated with the soil; (2) that portion of the stubble or litter left lying on the ground after such operations as thrashing or combining; or (3) such material as hay, straw, or other plant residues hauled in and spread over the ground. The function of stubble mulch is to (1) protect the surface from erosion by putting obstacles in the path of wind or water, and (2) to conserve moisture by favoring infiltration and reducing surface evaporation.

"In practice, the development of a stubble mulch ordinarily depends on a combination of subsurface tillage with preservation and utilization of crop residues grown in place. Usually part of the material is incorporated with the soil.

"Final retouching of this definition has just been achieved with the assistance of Dick Bailey, Charles Enlow, and M. L. Nichols. This definition carries, therefore, full approval of these authorities on mulching of all kinds and varieties."

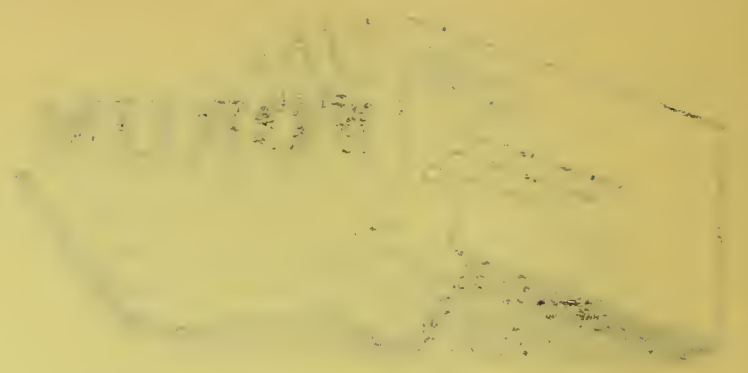
Signed. H.H.B.

Editor, Service News: Recently a Service employee made a visit to some of the soil conservation districts in another State to get some helpful ideas for his own State. Without knowing exactly who he was or his mission until several questions were answered, several farmers volunteered valuable information for him and for us. One question he asked was, "Do you farmers consider this soil conservation district program a government program or your own local program?"

The answer he got most frequently was, "No. It's not a government program. It's a district program. The district supervisors are the ones who carry on the program, but they have got the government to help them do the job."

Because this answer was not unanimous it indicates there is still lots of work to do with district supervisors and local people in helping them in the right way. It presents a challenge to personnel of the Soil Conservation Service and other agencies cooperating with soil conservation districts.

Signed: D.D.R.



WHAT IS A NURSEYMAN?

Dr. A. L. Hafenrichter of the Region 9 Nursery Division incorporated into his report of regional activities at the Conference of Nurserymen last week two very pointed definitions -- one concerning nurserymen and the other outlining the meaning of cooperation. SERVICE NEWS thought them good enough that we reprint them here.

"The nurseryman in SCS was regarded (5 years ago) as a botanist with ants in his pants, perennial spring in his heart, a textbook under his arm, a handful of collecting envelopes in his gun pocket, and the glint of ideology in his eye.

"He is now respected as a plant material specialist imbued with the tireless determination of the pioneer, the practicability of the manufacturer and the persuasion of a diplomat; fully aware that permanent agriculture through safe land use and soil conservation depends on the best use of the best plants, properly managed and cheaply produced."

"Cooperation between two or more agencies is a combination of efforts with the end result totalling more than the sum of the individual efforts of the participants working independently."

F. L. Duley, Soil Conservationist at Lincoln, Nebraska, attended the meeting of the American Society of Farm Managers and Rural Appraisers, held in Chicago, and read a paper concerning "Possible Effects of Improved Moisture Conservation Practice upon the Productivity and Value of Land."

Monticello, Iowa, CCC camp is celebrating the completion of two years, 54,801 man-days, without a single lost-time accident.

SCS SUBSCRIBES 82% OF COMMUNITY CHEST QUOTA

Final tabulations on SCS pledges to the Community Chest Campaign indicate that the Service has subscribed approximately 82 percent of its quota as against almost 72 percent last year. While the Chest committee, which has worked diligently to raise the funds, is disappointed that SCS did not go over the top with a hundred percent record, the workers are heartened by the fact that this year's record is an improvement of almost 11 percent over last year.

Col. Goodacre, chairman of the Chest Committee, has called attention to Budget and Finance Division which did subscribe 100 percent of its quota. Tabulations are being made by divisions and the comparative standings will be announced in a later issue of SERVICE NEWS.

The campaign has officially closed and no more solicitations will be made; however, the committee or any worker will be glad to receive contributions or additional pledges that anyone may care to make.

FLOOD CONTROL PUBLICATIONS

Two recent publications of interest in connection with flood control are now available for loan from the Service Library. They are:

U. S. Engineer school, Fort Belvoir, Va.
Flood Control. 1940.

Williams, G.R. et al. Natural Water
Loss in Selected Drainage Basins.
U. S. Geol. Survey Water Supply
Papers 846. 1940.

In its monthly analysis of the demand and price situation, BAE reports continuing improvement in the conditions affecting domestic demand for farm products.

DEFENSE NOTES

Chester Davis, who as a member of the National Defense Advisory Council is particularly concerned with farming problems, says that the "economic, social and political world of the future is going to be totally unlike the world of the past. We have the material, resources, the manpower and the genius to make ourselves impregnable, but let us not delude ourselves in the belief that we can accomplish that end and at the same time preserve untouched for classes and for individuals all of the privileges and prejudice that are embedded in the American democracy.

"If prejudices and privileges are disregarded it is possible to have guns and butter both. But it will not be possible to have full production for both defense and a standard of living if the important elements of our economy, industrial management and capital, labor and agriculture, successfully resist any modification of their traditional attitudes.

"The British people are getting a clear view of it ... (in England) complete mobilization means...a ruthless disregard of vested interests of orthodox finance of the peacetime profit and...living standards and the normal production ...wherever these obstruct the primary objectives of winning the war.

"Agriculture in the years ahead faces two tough assignments, it must continue to maintain sufficient supplies of food and fiber to meet the Nation's needs regardless of what develops. And it must adjust itself to the effect of war abroad and of the industrial speedup at home..." For example, he added, "We cannot be military friends and economic enemies with Latin America at one and the same time."

The War Department has inducted into the Army the first selectees. Although only 1,377 men took the oath of service on the first day of induction, by November 30 almost 20,000 civilian-soldiers from all areas of the country had become a part of the Army. The low figure of the first call, officials said, was explained by the tremendous spurt of volunteer enlistments which local draft boards were allowed to deduct from their quotas.

As the first men were given uniforms, Selective Service Director Dykstra announced a program of cooperation among Federal, State and local Governments to assure jobs for selectees after they return from military service. The plan provides definite arrangements not only for the return of old jobs to the men who left to enter the Army, but also, if possible, employment for men who are unemployed before they entered the Army. Integral links in the program are the Selective Service advisers on occupational deferments stationed at all State Selective Service headquarters.

"States desiring to organize a State Guard are required to prepare a comprehensive program of organization and training for guard duty, handling disorderly crowds, and overcoming the light resistance of armed forces. The attention of the State Guard will be particularly directed toward the guarding of utilities, power plants, water works, industrial plants, docks, railroad yards, air fields, and other sensitive areas. The State Guard will be formed as infantry or as military police."

The above paragraph is quoted from War Department plans for civil defense which are now being formulated.

THE BALANCE SHEET

Frederic J. Haskin in his column in the Washington (D.C.) Star writes concerning "Development of Submarginal Land". We quote from Mr. Haskin's article:

"What many economists think will be one direct result of the national defense program is permanency of the present policy of restoring and conserving millions of acres of land now classified as submarginal. This land policy, forced upon Federal and State governments by conditions unforeseen 50 years ago, ranks as a first on the Nation's conservation program. Although in its infancy, accomplishments of the policy so far point unmistakably to a major success....."

"Every civilization that has lost its identity first lost its soil, and every nation that has grown strong has conserved its land resources. This is the major thought back of this country's effort to redeem its wasted acres. And it is the thought that augurs well for a permanent land-use program."

20 FT. KNOTLESS BOARDS

The Journal of Forestry says that P. G. Krotkevich, of the Kiev (Russia) Forest Institute, expects to produce logs twenty or more feet in length, yielding boards without knots, by pruning young pines and other evergreen trees by a new "upside-down" method. The young tree is permitted to develop a bushy growth near the ground, until it is about 3 years old. After this, its central growth axis is prevented from producing any more branches above this ground-hugging bush, simply by pinching off all side buds. This leader grows into a long, pole-like sprout, deriving its nourishment from the bushy branches near the ground.

EVERYDAY SOIL CONSERVATION

Illustrating the extent to which soil conservation is daily becoming more and more a part of our everyday lives, two references to soil conservation appear in non-agricultural articles in the December issue of *Reader's Digest*:

Bernard De Voto, in an article called "Main Street Twenty Years After," reprinted from *Harper's*, points out that rural America is technologically up-to-date. He then adds: "It is heartening to see the progress made against the forces of disintegration -- forests growing in logged out areas, dams holding flood water back, land being built up where land had been blown away..."

Even stronger mention is made by Bruce Bliven, whose article called "Our Future As the Scientists Foresee It" was culled from *New Republic*. After making the point that our experts show little fear that mankind is exhausting our raw materials, because of new processes and substitutes, Blivens writes, "Certain types of wastes are just as dangerous as ever. The erosion of our soil would be fatal if it were to continue."

NEW SOIL MOISTURE METER

Prof. L. D. Baver and Byron T. Shaw of Ohio State University have perfected a soil moisture meter that measures and percentages quickly and accurately, according to an article written by A. J. Patch of the University and appearing in the November issue of *Country Gentleman*. The apparatus is constructed so that the part in contact with the soil can remain there permanently. When a determination is wanted, the portable meter is attached to the unit in the soil and the percentage of soil moisture is shown on a calibrated scale.

PRINTERS' INK

"Better Farming Methods Bring Back Wildlife" by Verne E. Davison, in November *Virginia Wildlife*.

"Some Factors Which Influence Infiltration and Its Measurement in Houston Black Clay" by C.W. Lauritzen and Norval L. Stoltenberg. November *Journal of the American Society of Agronomy*.

"Effect of Soil Treatment and Grazing Management on the Productivity, Erosion, and Run-off from Pasture Land" by C. A. Van Doren, W. L. Burlison, L. E. Gard, and R. F. Fuelleman. November *Journal of the American Society of Agronomy*.

"Viability of Buffalo Grass Seeds Found in the Walls of a Sod House" by Alvin E. Lowe. November *Journal of the American Society of Agronomy*.

"Yardsticks and the Four-Card Draw" by H. H. Finnell. October *Land Policy Review*.

"Borrowed Time in the Dust Bowl" by Edwin R. Henson. October *Land Policy Review*.

"Reliability of Station-Year Rainfall-Frequency Determinations" by Katharine Clarke-Hafstad. November *Proceedings of the American Society of Civil Engineers*.

"Recent Studies in Raindrops and Erosion" by J. Otis Laws. November *Agricultural Engineering*.

"Lilliputian Interlocking Steel Piling an Aid in Terrace Outlet Structures" by F. Edward Crosby. November *Agricultural Engineering*.

"Adjusting Farms to a Grassland Agriculture" by C. R. Enlow. November *National Seedsman*.

BULLETINS IN PAGE PROOF

"Shrubs for Wildlife on Farms in the Southwest" by Verne E. Davison. Leaflet No. 200.

"Supplemental Irrigation" by F.E. Staebner. Farmers' Bulletin No. 1846.

"Small Irrigation Pumping Plants" by Carl Rohwer and M. R. Lewis. Farmers' Bulletin No. 1857.

"The Slotted-Templet Method for Controlling Maps Made from Aerial Photographs" by Harry T. Kelsh. Miscellaneous Publication No. 404.

"The Story of Soil Conservation in the South Carolina Piedmont, 1800-1860" by Arthur R. Hall. Miscellaneous Publication No. 407.

"Erosion and Related Land Use Conditions in the Conestoga Area, Pa." by Bonsteel and Bass. Erosion Survey 15.

"Range Conservation Practices for the Great Plains" by B. W. Allred. Miscellaneous Publication No. 410.

"Working Plans for Permanent Farms" by Glenn K. Rule. Miscellaneous Publication No. 411.

"Methods of Distinguishing Between the Shipmast and Common Forms of Black Locust on Long Island, N. Y." by Henry Hopp. Technical Bulletin No. 742.

"Terrace Construction with Small Equipment in the South" by Weld and Price. Unnumbered Publication.

"Plowing for Terrace Maintenance in the South" by John M. Downing and Philip M. Price. Unnumbered Publication.